

REMARKS

Claims 1-5 are pending in the above-referenced application.
Claim 1 is amended.

Claim Rejections under 35 U.S.C. §102:

Erk et al

Claims 1-5 stand rejected under 35 U.S.C. 102(b), as being anticipated by US Patent 5,340,437 issued to Erk et al. (hereinafter Erk).
Applicant traverses.

Claim 1 recites, in pertinent part:

degassifying the liquid; and

injecting a gas into the liquid to regassify the liquid, the regassification increasing a total dissolved gas concentration in the liquid to greater than or equal to 200 ppb.

Erk neither teaches or suggests degassifying a liquid. Rather, Erk injects a gas into an etchant at a pressure higher than atmospheric pressure to dissolve the gas. Furthermore, as Erk states that the pressurized etchant contains compressed bubbles in addition to dissolved gas, Applicant respectfully asserts that Erk specifically teaches away from any degassification process as such would eliminate such compressed bubbles (column 3, line 23). In addition, as Erk is injecting gas into the etchant so that the gas will form a froth when the pressure is suddenly dropped, it would be inconceivable for the teachings of Erk to be construed to teach or suggest degassifying the etchant prior to

1 injecting the gas (ibid, lines 24-30). Furthermore, while Erk does not
2 discuss the specific concentration of dissolved gases in the etchant after
3 the sudden drop in pressure, Applicant asserts that Erk teaches that such
4 concentration be as low as possible. Referring to column 3, lines 42-45,
5 Erk essentially states that nitrogen is preferred over carbon dioxide as
6 it has a lower solubility.

7 Erk does not teach, at least, the limitations of degassifying and
8 regassifying a liquid, as recited in Claim 1 of the instant application.
9 Therefore it necessarily follows that the Examiner's rejection of Claim 1
10 under 35 U.S.C. §102(b) cannot meet the statutory requirement of such
11 a rejection. Hence, the rejection must be withdrawn. For at least the
12 same reasons, the rejection of Claims 2-5 depending from Claim 1, also
13 must be withdrawn. Applicant requests that the Examiner reconsider
14 Claims 1-5 in view of the remarks herein and pass them to issue in the
15 next action.

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17 *Liu et al*

18 Claim 1 stands rejected under 35 U.S.C. 102(b), as being
19 anticipated by US Patent 4,817,652 issued to Liu et al. (hereinafter Liu).
20 Applicant traverses.

21 As stated above, Claim 1 recites, among other things, degassifying
22 and regassifying a liquid. Liu, like Erk discussed above, does not teach
23 or suggest such limitations. Rather Liu, like Erk, teaches injecting a gas

1 into a liquid while the liquid is under pressure and then rapidly
2 depressurizing the liquid to caus. a plurality of bubbles to form (col. 5,
3 lines 15-40). As the forming of such bubbles is such a critical part of
4 Liu's invention it would be inconceivable for the teachings of Liu to be
5 construed as teaching or even suggesting a degassification process prior
6 to injecting the gas into the pressurized etchant (ibid).

7 As Liu does not teach the limitations of degassifying and
8 regassifying a liquid, as recited in Claim 1 of the instant application, it
9 necessarily follows that the Examiner's rejection of Claim 1 under
10 35 U.S.C. §102(b) cannot meet the statutory requirement of such a
11 rejection. Hence such a rejection must be withdrawn. Applicant
12 requests the Examiner reconsider Claim 1 in view of the remarks herein
13 and pass it to issue in the next action.

14 With regard to the prior art made of record and not relied upon
15 in the current action, Applicant respectfully asserts that none teach or
16 even suggest degassifying and regassifying a liquid and then using the
17 regassified liquid of the increased total gas concentration in a
18 semiconductor process.

19 In summary, Applicant respectfully asserts that Claims 1-5 are in
20 condition for allowance, which action is earnestly sought. In the event
21 that the next Office Action is one other than a Notice of Allowance, the
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1 Examiner is respectfully requested to phone the undersigned at any time
2 during normal business hours (Pacific Time Zone).

3 Respectfully submitted,

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5 Dated: Aug 9, 2000

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